Model AEG-WR

Wireless Receiver

Installation Manual

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DESCRIPTION

The Model AEG-WR Supervised Wireless Receiver allows up to 64 unique wireless security transmitters to report information to an Aegis automation controller. The wireless transmitters replace wired door and window sensors, as well as wired smoke, motion, and glassbreak detectors. These transmitters report status information to the AEG-WR Receiver which, in turn, processes the information and reports it to the controller.

The receiver is compatible with transmitters manufactured for the Aegis prodcuct by Linear Corporation. It supports Linear's Supervised S1, Megacode, and SX format transmitters.

COMPATIBLE TRANSMITTERS

We recommend the use of the SX format transmitters. These transmitters have an open air range of over 1000 feet. The SX format features compressed, encrypted data with error detection and correction for increased range, reliability, and ease of installation. Each of the SX format transmitters is factory programmed with one of over 16,000,000 I.D. codes.

The following are the most popular SX format transmitters that may be used:

T-90 Door/Window Transmitter - Used in the place of a wired magnetic switch, this stationary sensor has a built-in magnetic switch with adjustable magnet, may be connected externally to monitor other types of sensors, and is self-testing. It uses surface-mount technology and a lithium battery with a life expectancy of over 5 years

TMD-90 Passive Infrared Motion Detector - Uses passive infrared heat detection to sense motion

TGB-90 Glass Break Detector - Used to detect both audio emissions and shock vibrations of breaking glass

TSD-90 Smoke Detector - Supervised photoelectric smoke detector

TX-91, TX-92, and TX-94 Hand-Held Transmitters - One, two, and four button portable sensors

Although HSP recommends the use of SX series transmitters, 303.875 MHz S1 and Megacode transmitters may also be used with the AEG-WR Wireless Receiver. You can use up to 64 unique transmitters with the AEG-WR Receiver. Each zone reported to the controller can have

up to four transmitters assigned to it depending on the number of addresses assigned to the receiver.

The 64 transmitters are divided into 4 groups of 16, with the transmitters in each group numbered 1-16. One or more groups respond to each address assigned to the receiver. When multiple groups respond to the same address, the corresponding transmitters in each group are combined to determine the status to be reported for a zone.

The table below shows the address that each transmitter group responds to verses the number of addresses assigned to the receiver.

NUMBER OF ADDRESSES ASSIGNED

	1.00	2.00	3.00	4.00
1-16	1.00	1.00	1.00	1.00
17-32	1.00	2.00	2.00	2.00
33-48	1.00	1.00	3.00	3.00
49-64	1.00	2.00	1.00	4.00

The receiver can report status to 16 zones on an Aegis controller. Transmitters 1-16 report to zones 17-32. If a 17th transmitter is used, the status of that transmitter is reported to zone 17; the status of the 18th transmitter is reported to zone 18, etc.

The receiver can report status to 64 zones on an Aegis controller. When used with Aegis controller, wireless transmitters report to zones 33-96.

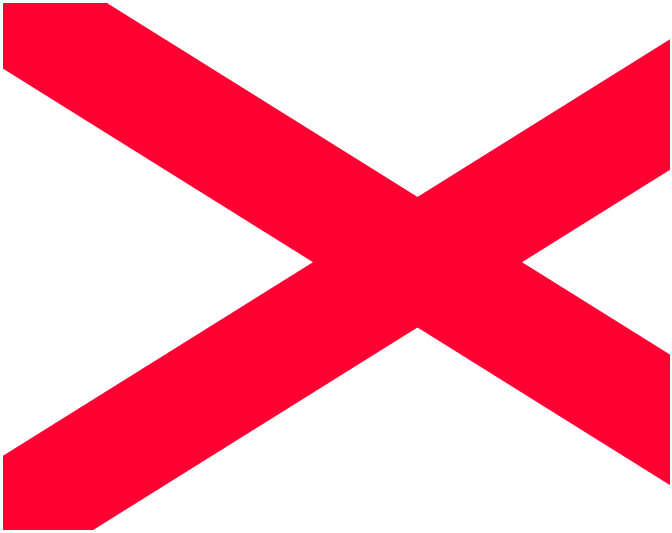
INSTALLATION

Install the receiver in a central area of the premises, as high above ground as practical. The receiver should be at least 5 feet from the controller or any other electronic device. The open air range of SX format transmitters is 3500 feet. However, this will be reduced by building construction as follows:

Wood and drywall	10%
Concrete and brick	35%
Steel, reinforced concrete, metal lath:	90%

When the location of the receiver has been established, remove the cover and position the receiver so that the antenna connector is at the top right. Mount the receiver, using supplied wall anchors and screws, through two mounting holes (upper left and bottom right). Allow at least a 12 inch clearance to mount the antenna.

Place the cover on the receiver and install the antenna onto the antenna connector. Connect the receiver to the controller using 4 conductor 22 gauge or larger wire as follows:



OPERATION

The two operating modes of the receiver are "Run" and "Set Up".

In Run mode, with the receiver connected to the controller, the Mode LED should blink once per second. The receiver monitors the status of each transmitter. If the status condition of a transmitter changes, it is reported to the receiver and the information is updated on the LED display.

The transmitter number flashes on the display whenever a transmission is received from a transmitter. The display will continually display the status of any transmitters that are violated

(not ready) or that have trouble. The transmitter number flashes on the display followed by the status condition(s).

LED DISPLAY	INFORMATION ABOUT THE LED DISPLAY
1.10	Displays the number of the transmitter with a change in condition.
A L	Displays that the current transmitter is "NOT READY".
C O	Displays that the cover was removed from the current transmitter.
S F	Displays that the current transmitter has a supervision failure.
L O	Displays that the current transmitter has reported a battery low.

NOTE: If the receiver is not communicating with the controller, the Mode LED will blink four times per second.

SET - The Set switch is used to increment or change the current selection.

MODE /ADVANCE - The MODE/Advance switch is used to enter Set Up mode, advance to the next Set Up item, and to confirm a selection. It is also used to exit Set Up mode.

LED DISPLAY - The LED DISPLAY is used to show the status of each transmitter and to ensure proper setup.

MODE LED - In Run mode, the MODE LED is used to indicate communication status with the controller. In Set Up mode, the Mode LED is used to give helpful information when entering your code, and indicates if a transmitter sends a restore code.

TYPE LED - In Set Up mode, the TYPE LED is used to give information when entering your code, and indicates if a transmitter is supervised.

The Set Up mode is used to configure the general operation of the receiver, to program a transmitter into the receiver, and to change the characteristics of a programmed transmitter. The Mode LED does not blink in Set Up mode.

To enter the Set Up mode, press and hold the Mode/Advance switch for approximately two seconds. You are first prompted to enter a four digit code. "C" is shown on the left of the display and the digit for each code number is shown on the right of the display. You must enter one digit at a time. The Set switch is used to increment the value of the digit. The Mode/Advance switch is used to advance to the next digit of the code. The Mode and Type LEDs are used to indicate which digit of the code is shown.

When no LED is lit, enter the first digit of the code. When the Type LED is lit, enter the second digit. When the Mode LED is lit, enter the third digit. When both the Type and Mode LEDs are lit, enter the fourth digit. The default code is 1111. If the correct code is entered, you will be allowed to enter Set Up mode. The receiver will return to Run mode if the wrong code is entered or if the Mode/Advance switch is pressed for two seconds prior to entering all the digits.

Use the Set switch to increment the first digit of the code.	**C 1**
Use the Set switch to increment the second digit of the code.	**C 1**
Use the Set switch to increment the third digit of the code.	**C.1**
Use the Set switch to increment the fourth digit of the code.	**C.1**

After entering the code you are prompted to enter the receiver address. "A" is shown on the left of the display and the current address is shown on the right. The address is changed by pressing the Set switch. The current address will be stored into memory when the Mode/Advance switch is pressed. Set Up mode is exited when the Mode/Advance switch is pressed for two seconds.

NOTE: When using the receiver with an Aegis system, the address must be set to "1".

Next, you are prompted to enter the number of addresses. The letter "n" is shown on the left of the display and the digit for the current number of addresses is shown on the right of the display. The number of addresses is changed by pressing the Set switch. The current number of addresses will be stored into memory when the Mode/Advance switch is pressed. Set Up mode is exited when the Mode/Advance switch is pressed for two seconds.

NOTE: When using the receiver with an HSP controller, the number of addresses must be set to "1".

The next four items allow you to change each digit of your security code. The Set switch is used to increment the value of each digit. The Mode/Advance switch is used to enter each digit and advance to the next.

Next, the programmed characteristics of each transmitter is displayed. The transmitter number is shown in the LED Display. If no transmitter is programmed for an address, neither the Mode LED nor the Type LED will be lit. If a transmitter is programmed, the Mode LED indicates whether the transmitter sends restore transmissions and the Type LED shows whether the transmitter is supervised.

The Mode LED is on if the transmitter sends restore transmissions, and off if it doesn't.

The Type LED is on steady if the transmitter is supervised, and blinks if it isn't.

The Set switch is used to change the characteristics of a programmed transmitter. Each press of the Set switch cycles through each combination of supervised, sends restores, or no transmitter programmed.

The Mode/Advance switch is used to change to the next transmitter address. Set Up mode is exited by pressing the Mode/Advance switch for two seconds.

TEACHING THE RECEIVER A TRANSMITTER ADDRESS

If no transmitter is programmed for an address, a new transmitter may be programmed into that address by activating the desired transmitter. The activated transmitter will then be entered into that address. The transmitter must be activated by pressing the test button or by causing a violation transmission to be sent. The SX TX-9x series transmitters are activated by pressing one of the buttons on the transmitter. Each button that will be used must be programmed as a separate transmitter. Supervisory, restores, battery low, and tamper transmissions are not learned.

Based on the type of transmitter received, the receiver will try to set the supervisory and restore characteristics appropriately for that type of transmitter. These can be changed as desired using the Set switch.

SX TX-9x series hand-held transmitters are set to non-supervised, restoring. SX TMD-90 motion detectors are set to supervised, non-restoring. All other SX transmitters are set to supervised, restoring. All S1 transmitters are set to supervised, restoring. All Megacode transmitters are set to non-supervised, non-restoring.

Once a transmitter is programmed into an address, the transmitter address will briefly turn off whenever a transmission from that transmitter is received. This can be used to verify that the correct transmitter has been programmed and is operating reliably.

NOTE: The current status of each transmitter is ignored by the controller while the receiver is in Set Up mode.

RESET MEMORY

To erase all transmitters from memory and to reset to the factory default configuration, press and hold both the Set and Mode/Advance switches simultaneously for 2 seconds. You are first prompted to enter a code (as mentioned above). After the code is entered, the display will show "EE". If you choose to continue, press and hold the Set and Mode/Advance switches simultaneously for 2 seconds once again. Memory is reset at the end of the two seconds.

NOTE: If you choose not to reset memory at the "EE" display, don't press any keys for a 10 second period and the receiver will return to Run mode.

SET UP

When using a Model AEG-WR Wireless Receiver, it first must be enabled. This option can be enabled by the installer in the Installer Setup menu.

```
INSTALLER SETUP:
1=CTRL  2=ZONE  3=DCM  ↓
```

From the Installer Setup menu, select the 2 (ZONE) key.

If used with an Aegis, press 2 (RCVR), then ' # ' to enable the AEG-WR Wireless Receiver.

```
ZONE EXPANSION:        0
0=NONE  1=H/W  2=RCVR  ↓
```

If used with an Aegis, you must set the Number of Expansion Enclosures.

```
NUMBER OF EXP ENCL:    0
1-4
```

If you are using 1-16 transmitters, enable only 1 Expansion Enclosure. If you are using 17-32 transmitters, enable 2 Expansion Enclosures, etc.

If Expansion Enclosures are also being used, set "NUMBER OF EXP ENCL:" to the number of expansion enclosures plus the number of addresses used by the receiver. Set the addresses for the expansion enclosures and receiver so that they don't overlap.

After the receiver has been enabled, you can press the down arrow (⇩) key to set the zone types for each of the expanded zones.

CONTROLLER INDICATIONS

When the condition of a transmitter changes state, the HAI controller will display that condition as follows:

Transmitter Condition	Aegis
When a transmitter (zone) is violated	Zone Name "NOT RDY"
When a cover is removed from a transmitter	Zone Name "NOT RDY"
When a supervisory failure is reported	Zone Name "TRBL NOW"
When a battery low is reported	Zone Name "HAD TRBL"

FCC NOTICE

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Verified to comply with the limits of a Class B digital device pursuant to Part 15 of the FCC Rules.

QUICK-REFERENCE SETUP GUIDE

To Enter Set Up mode, press and hold the Mode/Advance switch for 2 seconds.

DISPLAY	DESCRIPTION	SET SWITCH	MODE/ADVANCE SWITCH
C 0	Enter the first digit of the code	Increments the digit (0-9)	Advances to the next digit
C 0.	Enter the second digit of the code	Increments the digit (0-9)	Advances to the next digit
C.0	Enter the third digit of the code	Increments the digit (0-9)	Advances to the next digit
C.0.	Enter the fourth digit of the code	Increments the digit (0-9)	Advances to the next item
A 1	Enter the receiver address	Changes the current address (1-8)	Advances to the next item
n 1	Enter number of addresses	Changes number of addresses (1-4)	Advances to the next item
C 1	Displays the first digit of the code	Changes the current digit (0-9)	Advances to the next digit
C 1.	Displays the second digit of the code	Changes the current digit (0-9)	Advances to the next digit
C.1	Displays the third digit of the code	Changes the current digit (0-9)	Advances to the next digit
C.1.	Displays the fourth digit of the code	Changes the current digit (0-9)	Advances to the next item
1	Displays the status of transmitter 1	Changes characteristics of transmitter	Advances to the next transmitter
2	Displays the status of transmitter 2	Changes characteristics of transmitter	Advances to the next transmitter
3	Displays the status of transmitter 3	Changes characteristics of transmitter	Advances to the next transmitter

Characteristics of Transmitters:

DISPLAY	MODE LED	TYPE LED	DESCRIPTION OF THE DISPLAY
1	OFF	OFF	No transmitter is programmed at this address
1.	OFF	BLINKS	This transmitter is not supervised and doesn't send restore transmissions
.1.	ON	BLINKS	This transmitter is not supervised but sends restore transmissions
1.	OFF	ON	This transmitter is supervised but doesn't send restore transmissions
.1.	ON	ON	This transmitter is supervised and sends restore transmissions

To reset memory, press and hold the Set and Mode/Advance switches together for 2 seconds.

DISPLAY	DESCRIPTION	SET SWITCH	MODE/ADVANCE SWITCH
C 0	Enter the first digit of the code	Increments the digit (0-9)	Advances to the next digit
C 0.	Enter the second digit of the code	Increments the digit (0-9)	Advances to the next digit
C.0	Enter the third digit of the code	Increments the digit (0-9)	Advances to the next digit
C.0.	Enter the fourth digit of the code	Increments the digit (0-9)	Advances to the next item
E E	Erase EEPROM ? (Reset Memory)	Press and hold Set & Mode/Advance switches together for 2 seconds	